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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,364	07/03/2003	Koji Nii	402691	5401

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EXAMINER	
NGUYEN, LONG T	
ART UNIT	**PAPER NUMBER**
2816	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/612,364	NII, KOJI	
	Examiner	Art Unit	
	Long Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) *1-11,14,15,17 and 18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12,13 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/25/05 + 7/3/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of specie J (Figure 16) in the reply filed on 3/14/05 is acknowledged. Note that applicant indicates that claims 12, 13 and 16 read on Figure 16. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The disclosure is objected to because of the following informalities: on line 24 of page 29, it appears that "node NT1" should be changed to --node N1-- since NT1 is for a transistor. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12, 13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 12, the recitation "said control circuit setting one of the first and second voltages for turning on said second and third transistors to said first internal" on lines 13-14 is misdescriptive since the control circuit (10, Figure 16) does not provide any output to the first internal node (N1, Figure 16) so the control circuit cannot set any voltage to the first internal node. Clearly, from the operation of Figure 16, the control circuit (10) only provide an output to the second internal (N0). Further, the recitation "one of the first and second voltages" on line 16

is unclear antecedent basis since it is not clear whether it is the same one or a different one from the "one of the first and second voltages" recited earlier on lines 13-14. Clarification and/or appropriate correction is required.

Claims 13 and 16 is indefinite because they include the indefiniteness of claim 12.

Also, in claim 13, the recitation "said control circuit including a timing circuit corresponding to said second internal node" is indefinite because it is not clear what it is mean by "corresponding to said second internal node".

Also, in claim 16, this claim is also indefinite because there is no connection between the "fourth field-effect transistor" and any other elements in the circuitry, so it is not clear what is the relationship between the transistors and how they are connected, and it is also not clear from Figure 16 what transistor is the "fourth transistor" in this claim. Thus, claim 16 is being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kano (USP 5,166,55).

Insofar as understood in claims 12 and 13, Figure 2 of the Kano reference discloses a driver, which includes: an input (10); an output (20); a first transistor (26); a first voltage (Vdd);

a first internal node (G11); a second transistor (39); a second internal (G14); a second voltage (ground); a third transistor (27); and a control circuit (timing circuit 32-34), wherein the second transistor (39) has a driving force higher than a driving force of the third transistor (27, see lines 51-57 of Col. 4 and lines 2-7 of Col. 6). Note that the control circuit (timing circuit 32-34) supplying one of the first and second voltages (Vdd or ground) to the second internal node (G14) for a predetermined of time (output waveform of 34), and the timing circuit (32-34) adjust the predetermined period accordance with the voltage of the output node (base on the feedback from output 20 to the input of inverter 32 of the timing circuit 32-34). Also note that each of the first to third transistors are field effect transistors having respective oxide films (FETs having gate so having gate oxide films).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kano (USP 5,166,55) in view of Sessions (USP 6,166,580).

With respect to claim 16, the circuitry in Figure 2 of the Kano reference discloses a driver which meets all of the limitations of this claim as discussed above with regard to the 102 rejection (note the driver also including a fourth field-effect transistor (38)) except for the fourth FET (38) having a different gate oxide film from at least one of the first, second and third transistors (26, 39 and 27, respectively). However, the Sessions reference discloses a driver

circuit including transistors having different gate oxide thickness for the purpose of reducing the area of the overall circuitry (Col. 1, lines 19-24; and Col.4, lines 49-58). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify the circuitry in Figure 2 of the Kano reference by making the gate oxide film of the fourth transistor different than that from at least one of the first, second and third transistors (i.e., one oxide film thickness is thinner than the other one) for the purpose of reducing the area of the circuitry and achieve a desired performance and manufacturing goals. Thus, this modification meets all the limitations of claim 16 that the fourth transistor having the gate oxide film thickness different from at least one of the first, second and third transistors.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Thursday from 8:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 20, 2005

LONG NGUYEN
PRIMARY EXAMINER